## Part A. PERSONAL INFORMATION

| CV date | 08/07/20 |
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| First and Family name | Cristina López Díaz | | |
| Social Security, Passport, ID number | | Age | |
| Researcher codes | WoS Researcher ID | | |
| | SCOPUS Author ID | 6506233725 | |
| | Open Researcher and Contributor ID (ORCID) | 0000-0002-7532-163X | |

### A.1. Current position

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|---|---|---|---|
| Name of University/Institution | Universidad de Córdoba | | |
| Department | Departamento de Genética, Facultad de Ciencias | | |
| Address and Country | | | |
| Phone number | | E-mail | g02lodic@uco.es |
| Current position | Post-doctoral researcher | From | 01/09/2019 |
| Key words | Funal Pathogen, Evolution, Adaptation, Genomics, Bioinformatics | | |

### A.2. Education

| MSc/PhD | University | Year |
|---|---|---|
| MSc in "Producción, Protección y Mejora vegetal" | Universidad de Córdoba | 2013 |
| PhD in "Biociencias y Ciencias Agroalimentarias" | Universidad de Córdoba | 2019 |

### A.3. JCR articles, h Index, thesis supervised…

Continuous dedication to research since September 2009. Total of 6 articles published in international scientific journals, 5 in Q1, 2 of them as first and 2 as second author. Total of 198 citations (Source: Google scholar) with an average of 39.6 citations per year in the last 6 years. **5 of the articles received >10 citations (i10 index = 5; h-index = 5).**

## Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

I am an Agricultural Engineer from Universidad de Córdoba (UCO) (year 2012, grade 10/10 in the Final Degree Professional Project). In 2009 I joined the group of Prof. Enrique Quesada at the Department of Agricultural Entomology at UCO as an internship student, to carry out my final degree project in collaboration with the company Alcaliber SA, on the development of a monitoring method for the enthomopathogenic fungus *Beauveria bassiana* inside plants (*Papaver somniferum*). In January 2013, I joined the group of Prof. Antonio Di Pietro at the Department of Genetics at UCO as a Master student, to carry out my Master Thesis on homeostasis of Zinc (2013, grade 9/10). In 2015 I obtained a FPI Fellowship funded by MINECO, to carry out my PhD Thesis in the same research group (2019, Summa Cum Laude, International Mention).

In my PhDI Thesis work, **I started a new research line in the group focusing on experimental evolution in the fungal pathogen *Fusarium oxysporum*** under the supervision of Prof. Di Pietro. This work was carried out in collaboration with Prof. Li-Jun Ma at University of Massachusetts, Amherst, USA, an internationally recognized expert in comparative genomics of fungal pathogens. During my PhD Thesis, I performed a 4-month-stay in the group of Prof. Ma (funded by the MINECO), in order to deepen my knowledge on the bioinformatic analysis of genome sequencing data. During my PhD work I established the experimental evolution methodology for *F. oxysporum* and discovered genetic mechanisms underlying fungal adaptation to different environments, including the key role of DNA transposons in adaptive evolution of *F. oxysporum*.

Part of the results of my PhD Thesis have been published in a paper in Molecular Plant Pathology in which I am first author. Currently we are preparing two additional manuscript on the main findings of my Thesis, which will be submitted soon to high impact journals.

During my research period in the Di Pietro group, I have been co-director in 3 Final Grade Theses (TFGs) and 3 Final Master Theses (TFMs), and currently I am co-directing another TFM). I have collaborated in several competitive projects of the Spanish MINECO.
Since 2013, I have published 8 scientific articles in internationally recognized journals such as New Phytologist, PLoS One and Molecular Plant Pathology, 3 as first author, 4 as second author and 1 as third author. In the period from 2013 to 2019, my articles received a total of 198 citations (Source: Google scholar), and 5 received >10 citations (i10 index = 5; h-index = 5). I have 18 contributions to national and international conferences (5 oral presentations, 13 posters), including one best poster award

**Part C. RELEVANT MERITS**
**C.1. Publications (including books)**

1. **Cristina López Díaz (1/5),** Lucía Gómez-Gil, Elena Pérez Nadales, Gesabel Navarro Velasco and Antonio Di Pietro. Quantification and isolation of spontaneous colony growth variants. In press
1. Vista Sohrab, **Cristina López-Díaz (2/5)**, Antonio Di Pietro, Li-Jun Ma, Dilay Hazal Ayhan (2021).TEfinder: A Bioinformatics Pipeline for Detecting New Transposable Element Insertion Events in Next-Generation Sequencing Data. *Genes* Feb 4;12(2):224.doi: 10.3390/genes12020224.
2. Dilay Hazal Ayhan, **Cristina López-Díaz(2/4)**, Antonio Di Pietro, and Li-Jun Ma. 2018. Improved assembly of reference genome *Fusarium oxysporum* f. sp. *lycopersici* strain Fol4287. **Microbiol Resour Announc** 7: e00910-18. doi: 10.1128/MRA.00910-18. (Citations= 4)
3. **Cristina López-Díaz (1/8)**, Vahid Rahjoo, Michael Sulyok, Veronica Ghionna, Adela Martín-Vicente, Javier Capilla, Antonio Di Pietro, and Manuel S. López-Berges. 2018. Fusaric acid contributes to virulence of *Fusarium oxysporum* on plant and mammalian hosts. **Mol Plant Pathol** 19:440-453. doi: 10.1111/mpp.12536. (Citations= 34)
4. Libera Lo Presti, **Cristina López Díaz(2/7)**, David Turrà, Antonio Di Pietro, Martin Hampel, Kai Heimel and Regine Kahmann. 2016. A conserved co-chaperone is required for virulence in fungal plant pathogens. **New Phytol** 209:1135-1148. doi: 10.1111/nph.13703. (Citations= 13)
5. Jouda Guesmi-Jouini, Inmaculada Garrido-Jurado I, **Cristina López-Díaz (3/5)**, M Ben Halima-Kamel, Enrique Quesada-Moraga. 2014. Establishment of fungal entomopathogens *Beauveria bassiana* and *Bionectria ochroleuca* (Ascomycota: Hypocreales) as endophytes on artichoke *Cynara scolymus*. **J Invert Pathol** 119:1-4. doi: 10.1016/j.jip.2014.03.004. (Citations= 26)
6. Enrique Quesada-Moraga, **Cristina López-Díaz (2/3),** Blanca Beatriz Landa. 2014. The hidden habit of the entomopathogenic fungus *Beauveria bassiana*: First demonstration of vertical plant transmission. **PLoS ONE** 9:e89278. doi:10.1371/journal.pone.0089278. (Citations=67)
7. Blanca Beatriz Landa, **Cristina López-Díaz (1/7),** Daniel JiménezFernández, Miguel Montes-Borrego, Francisco Javier Muñoz Ledesma, Almudena Órtiz-Urquiza, Enrique Quesada-Moraga. 2014. In-planta detection and monitorization of endophytic colonization by a *Beauveria bassiana* strain using a new-developed nested and quantitative PCR-based assay and confocal laser scanning microscopy**. Inv Pathol.** 114:128-138. doi: 10.1016/j.jip.2013.06.007 (Citations=54)

**C.2. Collaboration in research projects and grants** PID2019-108045RB-I00.

1. Project title: Plasticidad celular y genética en la adaptación al huésped de los patógenos fúngicos PID2019-108045RB-I00. University of Córdoba. 314.700 €. June 2020. . PI: Antonio Di Pietro.
2. Project title: Mecanismos genéticos de la infección fúngica inducidos por el hospedador. MINECO (BIO2016-78923-R) University of Córdoba. 350.000 €. Jan 2017 - Dec 2019. PI: Antonio Di Pietro, M.Isabel González Roncero.
3. Project title: Adaptación genómica y molecular al estilo de vida patogénico en *Fusarium oxysporum*. MINECO (BIO2013-47870-R) University of Córdoba. 370.000 €. Jan 2014 – Dec 2016. PI: Antonio Di Pietro, M.Isabel González Roncero.

4. Project title: Empleo del hongo entomopatógeno *Beauveria bassiana* para la protección sistémica de la adormidera frente al ataque del barrenador del tallo *Timaspis papaveris.* TRACE PET2008-0050. University of Córdoba and Alcaliber S.A. 115.000 €. Dec 2008-Nov 2011. PI Enrique Quesada Moraga
5. Project title: Los hongos entomopatogenos y sus compuestos insecticidas en el desarrollo de herramientas sostenibles de CIP adaptadas al escenario del cambio climatico. MICINN (AGL2011-27646). University of Córdoba. 181.500 €. Jan 2012- Dec 2014. PI Enrique Quesada Moraga.
6. Project title: Empleo de Hongos Entomopatógenos para el Control Biológico de *Varroa destructor*, Parásito de la Abeja Melífera *Apis mellifera.* DAP-2004-EC-35. Empresa Pública de Desarrollo Agrario y Pesquero de Andalucía DAP. Junta de Andalucía. University of Córdoba, CIFA of Granada and Newbiotechnic S.A. 88.000 €. Dec 2005-Dec 2008. PI Enrique Quesada Moraga

**C.3. Contracts**

1. **Postdoctoral researcher**: Universidad de Córdoba. From 01/10/2019 to present. Approx. 1400 € netos/mes. PI Antonio Di Pietro.
2. **FPI PhD student:** MINECO, Universidad de Córdoba. From 01/04/2015 – 31/03/2019. Approx. 1100 € netos/mes. PI Antonio Di Pietro.
3. **Researcher:** Universidad de Córdoba. Years 2011, 2012 y 2013. Approx. 800 € netos/mes. PI Enrique Quesada Moraga.

**C.4. Contributions to national or international conferences (10 out of a total of 18)**

1. **Cristina López Díaz,** Dilay Hazal Ayhan, Li-Jun Ma, Antonio Di Pietro. DNA transposons drive adaptative evolution in the fungal cross-Kingdom pathogen *Fusarium oxysporum*. February 17-20, 2020. 15th European Conference on Fungal Genetics, Roma, Italy.
2. Lucia Gomez Gil, **Cristina López Díaz,** Dilay Hazal Ayhan, Li-Jun Ma, Antonio Di Pietro. Structural dynamics of chromosomes and its role in genome plasticity of *Fusarium oxysporum*. February 17-20, 2020. 15th European Conference on Fungal Genetics, Roma, Italy.
3. Dilay Hazal Ayhan, **Cristina López Díaz,** Antonio Di Pietro, Li-Jun Ma. Active transpositions of DNA transposons and their evolutionary consequences in the *Fusarium oxysporum* f. sp. *lycopersici* genome. March 12-17, 2019. 30th Fungal Genetics Conference, Asilomar, CA, USA.
4. Dilay Hazal Ayhan, **Cristina López Díaz**, Antonio Di Pietro, Li-Jun Ma. Experimental evolution of the fungal pathogen *Fusarium oxysporum*. February 25-28, 2018. 14th European Conference on Fungal Genetics, Haifa, Israel.
5. **Cristina López Díaz,** Dilay Hazal Ayhan, J.Jose Gines, Isabel Okeke-Infante, Li-Jun Ma, Antonio Di Pietro. Experimental evolution in the fungal pathogen *Fusarium oxysporum* to study mechanisms of genome plasticity and host adaptation. October 24-27, 2017. 1st joint Congress of the Spanish Societies for Cell Biology, Genetics and Developmental Biology, Gijon, Spain.
6. **Cristina López Díaz,** Dilay Hazal Ayhan, J.Jose Gines, Isabel Okeke-Infante, Li-Jun Ma, Antonio Di Pietro. Chromosome plasticity during experimental evolution of the cross-kingdom pathogen *Fusarium oxysporum.* June 20-23, 2017.15th Congress of the Mediterranean Phytopathological Union, Córdoba, Spain.
7. **Cristina López Díaz,** Dilay Hazal Ayhan, Li-Jun Ma, Antonio Di Pietro. Chromosome plasticity during experimental evolution of the cross-kingdom pathogen *Fusarium oxysporum.* March 14-17, 2017. 29th Fungal Genetics Conference, Asilomar, CA, USA.
8. **Cristina López Díaz,** Miguel Pérez Redondo, Antonio Di Pietro Plasticidad genómica y versatilidad patogénica en el hongo *Fusarium oxysporum.* September 15-18, 2015. XL Congreso de la Sociedad Española de Genética, Córdoba, Spain
9. **Cristina López-Díaz,** Blanca B. Landa del Castillo, Fº Javier Muñoz-Ledesma, Enrique Quesada-Moraga. In planta detection and quantification of an endophytic *Beauveria*

*bassiana* strain. June 19-23, 2011. 13th European Meeting of the IOBC/WPRS Working Group "Insect Pathogens and Insect Parasitic Nematodes" Innsbruck, Austria.

10. **Cristina López-Díaz,** Blanca B. Landa del Castillo, Fº Javier Muñoz-Ledesma, Enrique Quesada-Moraga. Tratamiento de semilla de adormidera con una cepa endofito de *Beauveria bassiana* (Ascomycota; Hypocreales): eficacia para el control sistémico del barrenador *Iraella luteipes* (Thompson) (Hymenoptera; Cynipidae) y detección en planta del hongo entomopatógeno. October 24-28, 2011. VII Congreso Nacional de Entomologia Aplicada, Baeza, Spain.

**C.5, Academic work supervised**

**Master Theses (TFM)**

1. Evolución adaptativa y efectos sobre la virulencia del hongo patógeno *Fusarium oxysporum*. Ana Rodríguez López. Course 2019-2020. Co-directors: Antonio Di Pietro/Cristina López Díaz. Grade: 9,66/10
2. Evolución experimental en el hongo patógeno *Fusarium oxysporum.* Isabel Chinyere Okeke Infante. Course 2017-2018. Co-directors: Antonio Di Pietro/Cristina López Díaz. Grade: 8,6/10
3. Papel de la transposasa en la plasticidad genómica del hongo patógeno *Fusarium oxysporum f. sp lycopersici.* Juan Jose Gines Rivas. Course 2015-2016. Co-directors: Antonio Di Pietro/Cristina López Díaz. Grade: 9/10

**Final Grade Theses (TFG)**

1. Evolución experimental en el hongo patógeno *Fusarium oxysporum.* Tania Chica Cid. Course 2017-2018. Co-directors: Antonio Di Pietro/Cristina López Díaz. Grade: 9,6/10
2. Evolución experimental en el hongo patógeno *Fusarium oxysporum.* Isabel Chinyere Okeke Infante. Course 2016-2017. Co-directors: Antonio Di Pietro/Cristina López Díaz. Grade: 9,8/10
3. Deteccion y analisis de sucesos de inestabilidad genomica en *Fusarium oxysporum*. Miguel Perez Redondo. Course 2014/2015. Co-directors: Antonio Di Pietro/Cristina López Díaz. Grade: 8,7

**C.5 Honours & Awards**

**Description:** Best poster Award. XL Congreso de la Sociedad Española de Genética, 2015)
**Awarding entity**: Sociedad Española de Genética (SEG).

**C.6. Collaborations**

I have been collaborating for more than 4 years with the group of Prof. Li-Jun Ma at University of Massachussetts, Amherst, USA, on the identification of changes in the genome of experimentally evolved populations of *Fusarium oxysporum*, using advanced bioinformatic tools. In addition, I have collaborated with 24 different researchers (Source: Scopus).

**C.7.Other merits**

1. Teaching experience, To date, I have taught a total of more than 75 hours in core and compulsory modules in fields related to genetic in Biochemistry and Biology Degrees.
2. Honorary collaborator at the Departamento de Genética, Universidad de Córdoba, Spain; Academic course 2014/2015.
3. Internship student funded by research project at the Departamento de Ciencias y Recursos Agricolas y Forestales, Universidad de Córdoba, Spain. Academic courses 2007/2008, 2008/2009, 2009/2010, 2010/2011.